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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,209	03/23/2004	Shuichi Tsukada	OGW-0311	1922

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EXAMINER	
FISCHER, JUSTIN R	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/806,209	TSUKADA ET AL.	
	Examiner	Art Unit	
	Justin R. Fischer	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. In light of applicant's arguments, the previously applied rejections in view of either one of Kajiwara or Numata have been withdrawn- a new set of rejections has been established below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over either one of Kajiwara (JP 03193510) or Numata (JP 11170824) in view of Akiyoshi (JP 2001-113902), Martin (US 4,034,792), McDonald (US 4,343,342), Sakamoto (US 6,418,993), and Hendrie (US 6,536,368). Kajiwara (Figures 1 and 2) and Numata (Figures 1, 2, and 5) disclose pneumatic tire constructions in which a rubber member or "volume adjusting member" is arranged between an inner liner and a carcass layer in the bead regions. It is clearly evident from each figure that the inclusion of rubber member reduces the volume of the tire cavity by altering the contour of tire inner surface (change in section shape). The reference, however, is silent as to the formation of such members in a circumferentially discontinuous manner (intermittently arranged). In any event, it is extremely well known in the tire industry to form a wide variety of tire layers and components in either a continuous or discontinuous manner, as shown for example by Akiyoshi (Figures 1-10), Martin (Figures 1 and 6), McDonald (Column 2, Lines 1-10),

Sakamoto (Column 1, Lines 30-40), and Hendrie (Column 3, Lines 30-40). In such instances, sufficient reinforcement or effect on a given property is obtained and tire weight is minimized. It is emphasized that the concept of forming tire layers in a discontinuous manner is extremely well known and conventional in the tire industry and as such, one of ordinary skill in the art at the time of the invention would have found it obvious to incorporate such a design in either Kajiwara or Numata depending on the desired distribution of the reinforcement. Lastly, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the formation of such members in a discontinuous or intermittent fashion.

In particular, Akiyoshi is directed to an extremely similar tire construction in which a "volume adjusting member" is discontinuously arranged over the circumferential extent of the tire- in this instance, a discontinuous arrangement is able to provide the desired reduction in noise (reduction in columnar resonance), which is the same benefit achieved in the tire of Kajiwara. As such, there would have been a reasonable expectation of success in forming the construction of Kajiwara with an intermittent or discontinuous arrangement.

Regarding claim 2, discontinuous arrangements are commonly formed with equal spacings (see above noted references).

As to claim 3, Kajiwara teaches a thickness between 3 and 10 millimeters (Page 59, bottom right) and Numata teaches a thickness between 1.5 and 2.5 millimeters (Abstract).

4. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajiwara (JP 03193510), Numata (JP 11170824), Akiyoshi, Martin (US 4,034,792), McDonald (US 4,343,342), Sakamoto (US 6,418,993), and Hendrie (US 6,536,368) as applied in the claims above and further in view of Yamada (JP 02106330). Kajiwara and Numata are silent as to the specific tire manufacturing method. In any event, the claimed method is consistent with the common methods of forming tires, as shown for example by Yamada (Abstract and Figures 2 and 3). In this instance, Yamada recognizes the placement of a reinforcing layer (analogous to rubber members) on each side of a base rubber sheet (analogous to inner liner), subsequently winding the assembly on a drum, and winding any additional layers and finally curing/vulcanizing the tire. It is emphasized that such a winding technique around a drum is extremely well known and extensively used in the manufacture of tires.

Response to Arguments

5. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection. As set forth above, the combination of references suggest that the formation of continuous and discontinuous components is extremely well known in the tire industry. In particular, Akiyoshi, as compared to Kajiwara, is directed to an extremely similar "noise reducing system" in which the respective members are arranged in a continuous or discontinuous manner- such a disclosure suggests that sufficient noise reduction is achieved with a discontinuous arrangement, which itself contributes to the reduction of tire weight. Lastly, in regards to the results of Table 2, they represent a comparison between the inventive structure and

structures having the members on the interior of the tire cavity at the crown and bead portion such a comparison is not seen to include the closest prior art because each of Kajiwara and Numata expressly teach a tire construction having a "volume adjusting member" between the carcass and inner liner. It is suggested that applicant compare the inventive tire construction with that of Kajiwara or Numata (applicant has not provided a conclusive showing of unexpected results over the closest prior art, that being Kajiwara and Numata).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin Fischer
March 29, 2006